

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY (Chapter I of the Patent Cooperation Treaty)

(PCT Rule 44bis)

Applicant's or agent's file reference P041827P0	FOR FURTHER ACTION	See item 4 below
International application No. PCT/JP2006/303024	International filing date (<i>day/month/year</i>) 21 February 2006 (21.02.2006)	Priority date (<i>day/month/year</i>) 15 March 2005 (15.03.2005)
International Patent Classification (8th edition unless older edition indicated) See relevant information in Form PCT/ISA/237		
Applicant MATSUSHITA ELECTRIC INDUSTRIAL CO., LTD.		

1.	This international preliminary report on patentability (Chapter I) is issued by the International Bureau on behalf of the International Searching Authority under Rule 44 bis.1(a).																								
2.	This REPORT consists of a total of 6 sheets, including this cover sheet. In the attached sheets, any reference to the written opinion of the International Searching Authority should be read as a reference to the international preliminary report on patentability (Chapter I) instead.																								
3.	<p>This report contains indications relating to the following items:</p> <table style="width: 100%;"> <tr> <td style="width: 10%; text-align: center;"><input checked="" type="checkbox"/></td> <td style="width: 30%;">Box No. I</td> <td style="width: 60%;">Basis of the report</td> </tr> <tr> <td style="text-align: center;"><input type="checkbox"/></td> <td>Box No. II</td> <td>Priority</td> </tr> <tr> <td style="text-align: center;"><input type="checkbox"/></td> <td>Box No. III</td> <td>Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</td> </tr> <tr> <td style="text-align: center;"><input type="checkbox"/></td> <td>Box No. IV</td> <td>Lack of unity of invention</td> </tr> <tr> <td style="text-align: center;"><input checked="" type="checkbox"/></td> <td>Box No. V</td> <td>Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</td> </tr> <tr> <td style="text-align: center;"><input type="checkbox"/></td> <td>Box No. VI</td> <td>Certain documents cited</td> </tr> <tr> <td style="text-align: center;"><input type="checkbox"/></td> <td>Box No. VII</td> <td>Certain defects in the international application</td> </tr> <tr> <td style="text-align: center;"><input checked="" type="checkbox"/></td> <td>Box No. VIII</td> <td>Certain observations on the international application</td> </tr> </table>	<input checked="" type="checkbox"/>	Box No. I	Basis of the report	<input type="checkbox"/>	Box No. II	Priority	<input type="checkbox"/>	Box No. III	Non-establishment of opinion with regard to novelty, inventive step and industrial applicability	<input type="checkbox"/>	Box No. IV	Lack of unity of invention	<input checked="" type="checkbox"/>	Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement	<input type="checkbox"/>	Box No. VI	Certain documents cited	<input type="checkbox"/>	Box No. VII	Certain defects in the international application	<input checked="" type="checkbox"/>	Box No. VIII	Certain observations on the international application
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4.	The International Bureau will communicate this report to designated Offices in accordance with Rules 44bis.3(c) and 93bis.1 but not, except where the applicant makes an express request under Article 23(2), before the expiration of 30 months from the priority date (Rule 44bis .2).																								

<p style="text-align: center;">The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland</p> <p>Facsimile No. +41 22 338 82 70</p>	<p>Date of issuance of this report 18 September 2007 (18.09.2007)</p> <p>Authorized officer Yoshiko Kuwahara</p> <p>e-mail: pt07.pct@wipo.int</p>
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PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

TRANSLATION
PCT

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43bis.1)

To:

Date of mailing
(day/month/year)

Applicant's or agent's file reference

P041827P0

FOR FURTHER ACTION

See paragraph 2 below

International application No.

PCT/JP2006/303024

International filing date (day/month/year)

21.02.2006

Priority date (day/month/year)

15.03.2005

International Patent Classification (IPC) or both national classification and IPC

Applicant

MATSUSHITA ELECTRIC INDUSTRIAL CO., LTD.

1. This opinion contains indications relating to the following items:

- | | | |
|-------------------------------------|--------------|--|
| <input checked="" type="checkbox"/> | Box No. I | Basis of the opinion |
| <input type="checkbox"/> | Box No. II | Priority |
| <input type="checkbox"/> | Box No. III | Non-establishment of opinion with regard to novelty, inventive step and industrial applicability |
| <input type="checkbox"/> | Box No. IV | Lack of unity of invention |
| <input checked="" type="checkbox"/> | Box No. V | Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement |
| <input type="checkbox"/> | Box No. VI | Certain documents cited |
| <input type="checkbox"/> | Box No. VII | Certain defects in the international application |
| <input checked="" type="checkbox"/> | Box No. VIII | Certain observations on the international application |

2. **FURTHER ACTION**

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA/JP

Date of completion of this opinion

Authorized officer

Facsimile No.

Telephone No.

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/JP2006/303024

Box No. I

Basis of this opinion

1. With regard to the language, this opinion has been established on the basis of:
 - ☒ the international application in the language in which it was filed
 - ☐ the translation of the international application into _____, which is the language of a translation furnished for the purposes of international search (Rule 12.3(a) and 23.1(b)).
2. With regard to any nucleotide and/or amino acid sequence disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
 - a. type of material
 - ☐ a sequence listing
 - ☐ table(s) related to the sequence listing
 - b. format of material
 - ☐ on paper
 - ☐ in electronic form
 - c. time of filing/furnishing
 - ☐ contained in the international application as filed
 - ☐ filed together with the international application in electronic form
 - ☐ furnished subsequently to this Authority for the purposes of search
3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table(s) relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No.

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Box No. V	Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement																										
<p>1. Statement</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 30%; vertical-align: top;">Novelty (N)</td> <td style="width: 10%; vertical-align: top;">Claims</td> <td style="width: 50%; border-bottom: 1px solid black;">1-6</td> <td style="width: 10%; text-align: right; vertical-align: bottom;">YES</td> </tr> <tr> <td></td> <td style="vertical-align: top;">Claims</td> <td style="border-bottom: 1px solid black;"></td> <td style="text-align: right; vertical-align: bottom;">NO</td> </tr> <tr> <td style="vertical-align: top;">Inventive step (IS)</td> <td style="vertical-align: top;">Claims</td> <td style="border-bottom: 1px solid black;"></td> <td style="text-align: right; vertical-align: bottom;">YES</td> </tr> <tr> <td></td> <td style="vertical-align: top;">Claims</td> <td style="border-bottom: 1px solid black;">1-6</td> <td style="text-align: right; vertical-align: bottom;">NO</td> </tr> <tr> <td style="vertical-align: top;">Industrial applicability (IA)</td> <td style="vertical-align: top;">Claims</td> <td style="border-bottom: 1px solid black;">1-6</td> <td style="text-align: right; vertical-align: bottom;">YES</td> </tr> <tr> <td></td> <td style="vertical-align: top;">Claims</td> <td style="border-bottom: 1px solid black;"></td> <td style="text-align: right; vertical-align: bottom;">NO</td> </tr> </table>				Novelty (N)	Claims	1-6	YES		Claims		NO	Inventive step (IS)	Claims		YES		Claims	1-6	NO	Industrial applicability (IA)	Claims	1-6	YES		Claims		NO
Novelty (N)	Claims	1-6	YES																								
	Claims		NO																								
Inventive step (IS)	Claims		YES																								
	Claims	1-6	NO																								
Industrial applicability (IA)	Claims	1-6	YES																								
	Claims		NO																								
<p>2. Citations and explanations:</p> <p>Cited document 1: JP, 2004-304512, A (Matsushita Electric Industrial Co., Ltd.), 28 October, 2004 (28.10.04), all pages, all drawings</p> <p>Cited document 2: JP, 2004-221691, A (Onkyo Corporation), 5 August, 2004 (05.08.04), all pages, all drawings</p> <p>Cited document 3: JP, 4-192800, A (Sharp Corporation), 10 July, 1992 (10.07.92), all pages, all drawings</p> <p>Cited document 4: microfilm of the specification and drawings annexed to the written application of Japanese Utility Model Application No. 55/187380 (Laid-open No. 57/109697) (Matsushita Electric Industrial Co., Ltd.), 6 July, 1982 (06.07.82), all pages, all drawings</p> <p>Subject matter of claims 1-6:</p> <p>When the subject matter of claim 1 is compared with the cited document 1, they are different from each other only in (1) that they are opposite to each other in the relative positional relationship between the coupling portion of the suspension holder of the cited document 1 (which corresponds to the support body of the subject matter of claim 1) coupled with the diaphragm and the coupling portion of the second edge, and (2) that the fixing position of the second edge is not in the vicinity of the magnetic circuit but in the frame. The subject matter of claim 1 and the invention of cited document 1 are identical in the other components.</p> <p>Meanwhile, the cited documents 2 and 3 disclose a so-called inner damper system in which a damper is disposed inside a voice coil. The inner circumference of the damper is fixed not to the frame but to the magnetic circuit. Further, the cited document 4 discloses a configuration in which an outer circumferential portion of the damper is fixed not to the voice coil but to the slope of a cone, and in which the inner circumference of the damper is fixed to a fixing portion provided to a center pole.</p> <p>Therefore, the subject matter of claim 1 is easily achievable by combining cited document 1 with cited documents 2-4.</p> <p>As for the configuration of the subject matter of claim 2 in which the second edge is fixed to an end portion of the magnetic circuit, an internal magnet type magnetic circuit including a pot-shaped yoke naturally has such a configuration. Thus, the configuration is merely the addition of a design variation.</p> <p>As for the configuration of the subject matter of claim 3 in which the second edge is fixed to a fixing member provided to the outer circumference of the magnetic circuit, cited document 3 discloses a configuration in which the damper is fixed directly to the magnetic circuit or to a damper board provided on the magnetic circuit. Thus, the configuration is easily achievable by combining cited documents 1-4. As for the position in the magnetic circuit at which the fixing member is disposed, the selection of an appropriate position for the configuration of the magnetic circuit is a</p>																											

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International application No.

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Box No. V

Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability;
citations and explanations supporting such statement

matter selectable as required at the implementation stage.

As for the configuration of the subject matter of claim 4 in which the fixing member is formed integrally with the frame, to fix an end of the damper to the frame is a common practice. Further, to form a step portion or the like to the frame for fixing purpose is a design variation.

As for the configuration of the subject matter of claim 5 in which an upper end surface of the fixing member is set at a lower position than an end portion of the magnetic circuit, cited document 1 discloses a frame which is in internal contact with the outer circumferential surface of the yoke, and which rises from a position slightly lower than the upper end surface of the yoke and expands in the direction departing from the yoke. Therefore, the subject matter of claim 5 is easily achievable by combining cited documents 1-4.

As for the configuration of the subject matter of claim 6 in which the first edge and the second edge are formed of substantially the same material, claim 10 of cited document 1 discloses that the first edge and second edge are both formed of urethane. Therefore, the subject matter of claim 6 is also easily achievable by combining cited documents 1-4.

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/JP2006/303024

Box No. VIII Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

(1) The description of claim 1 that “the first edge has a shape substantially similar to the shape of the second edge with respect to the boundary between the first edge and the second edge” is unclear. In the first place, the similarity relationship between the shapes of two objects is unrelated to their relative positional relationship. In the conventional example mentioned by the applicant, i.e., the example illustrated in Figs. 3 and 5 of Japanese Unexamined Patent Application No. 11-150791, too, the roll of the edge and the roll of the damper are substantially similar in shape.

(2) The description of claim 1 includes “a bottom-equipped cylindrical frame.” However, the specification and the drawings show a frame which widely expands upward from the bottom surface thereof, and describe only a flat dish-shaped configuration. Therefore, the configuration specified in the above description as “cylindrical” is unclear, and the description of the claim is inconsistent with the description of the specification and the drawings.

(3) It is unclear which part is referred to by “an end portion of the magnetic circuit” described in claim 2. Paragraph [0019] describes the upper end surface of the yoke as an end portion. Referring to the drawings, however, it is obvious that the bottom surface of the yoke and the upper surface of the plate are both end portions of the magnetic circuit. Thus, it is unclear which one of them is referred to as the end portion of the magnetic circuit.